

WHAT IS CLAIMED IS:

1. An optical communication device, comprising:
a first substrate having a light-emitting element or a light-receiving element on one side of the first substrate;
a second substrate having an electronic circuit to perform operation control of the light-emitting element or the light-receiving element; and
a flexible substrate which connects a section between the light-emitting element or the light-receiving element and the electronic circuit while achieving impedance matching.
2. The optical communication device according to Claim 1,
the first substrate having the light-emitting element, the light receiving element and a preamplifier,
the preamplifier being mounted in proximity with the light receiving element and converts an output current of the light receiving element to a voltage signal.
3. The optical communication device according to Claim 1, the first and second substrates being arranged in such a manner as to be nearly at right angles to each other.
4. The optical communication device according to Claim 1, one end portion of the flexible substrate being bonded in such a manner as to cover nearly the entire surface of the first substrate.
5. The optical communication device according to Claim 1, the flexible substrate including a microstrip line having a flexible insulating substrate, a signal line arranged on one side of the insulating substrate, and a grounding film arranged on the other side of the insulating substrate, and the microstrip line serves the impedance matching function.
6. The optical communication device according to Claim 5,
the grounding film surrounding the light-emitting element or the light-receiving element.
7. The optical communication device according to Claim 1, the flexible substrate including a first microstrip line including a flexible insulating substrate, a first signal line arranged on one side of the insulating substrate, and a first grounding film arranged on the other side of the insulating substrate; and a second microstrip line including the insulating substrate, a second signal line arranged on the other side of the insulating substrate, and a second grounding film arranged on the one side of the insulating substrate.

8. The optical communication device according to Claim 7, the first grounding film and the second grounding film being arranged in such a manner as to partially overlap each other, with the insulating substrate therebetween.

9. The optical communication device according to Claim 1, the first substrate being formed of a light-transmitting member, and

a light-emitting surface or a light-receiving surface of the light-emitting element or the light-receiving element being arranged so as to face the first substrate.

10. The optical communication device according to Claim 9, the light-emitting element or the light-receiving element being arranged inside an opening of the flexible substrate, which is made to overlap the first substrate.

11. The optical communication device according to Claim 1, the light-emitting element or the light-receiving element being arranged on the flexible substrate, which is made to overlap the first substrate.

12. The optical communication device according to Claim 11, the flexible substrate having an opening that exposes a light-emitting surface of the light-emitting element or a light-receiving surface of the light-receiving element.

13. The optical communication device according to Claim 10, further comprising: a lens to collect outgoing light from the light-emitting element or incident light to the light-receiving element.

14. The optical communication device according to Claim 13, the lens being formed integrally with the first substrate.

15. The optical communication device according to Claim 1, the first substrate being formed of a non-light-transmitting member, and

the light-emitting element or the light-receiving element being arranged back-to-back with one side of the first substrate so that the light-emitting surface or the light-receiving surface is directed toward free space.